

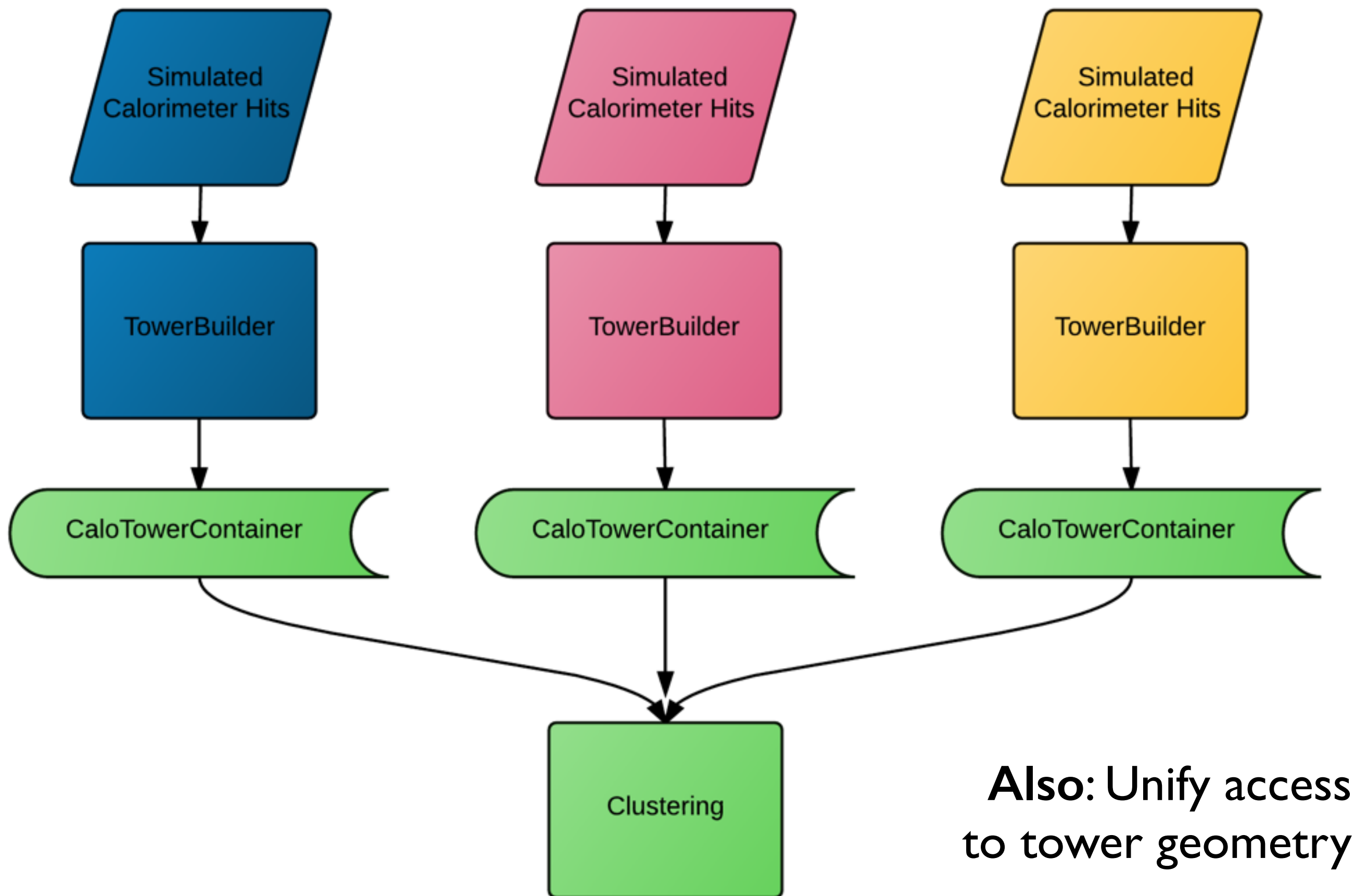


Stony Brook University

Thoughts about a new Calorimeter Tower object (CaloTower)

Nils Feege, Jin Huang, Chris Pinkenburg, *et al.*

Simulation Workfest for A Large-Acceptance Jet and Upsilon Detector for RHIC
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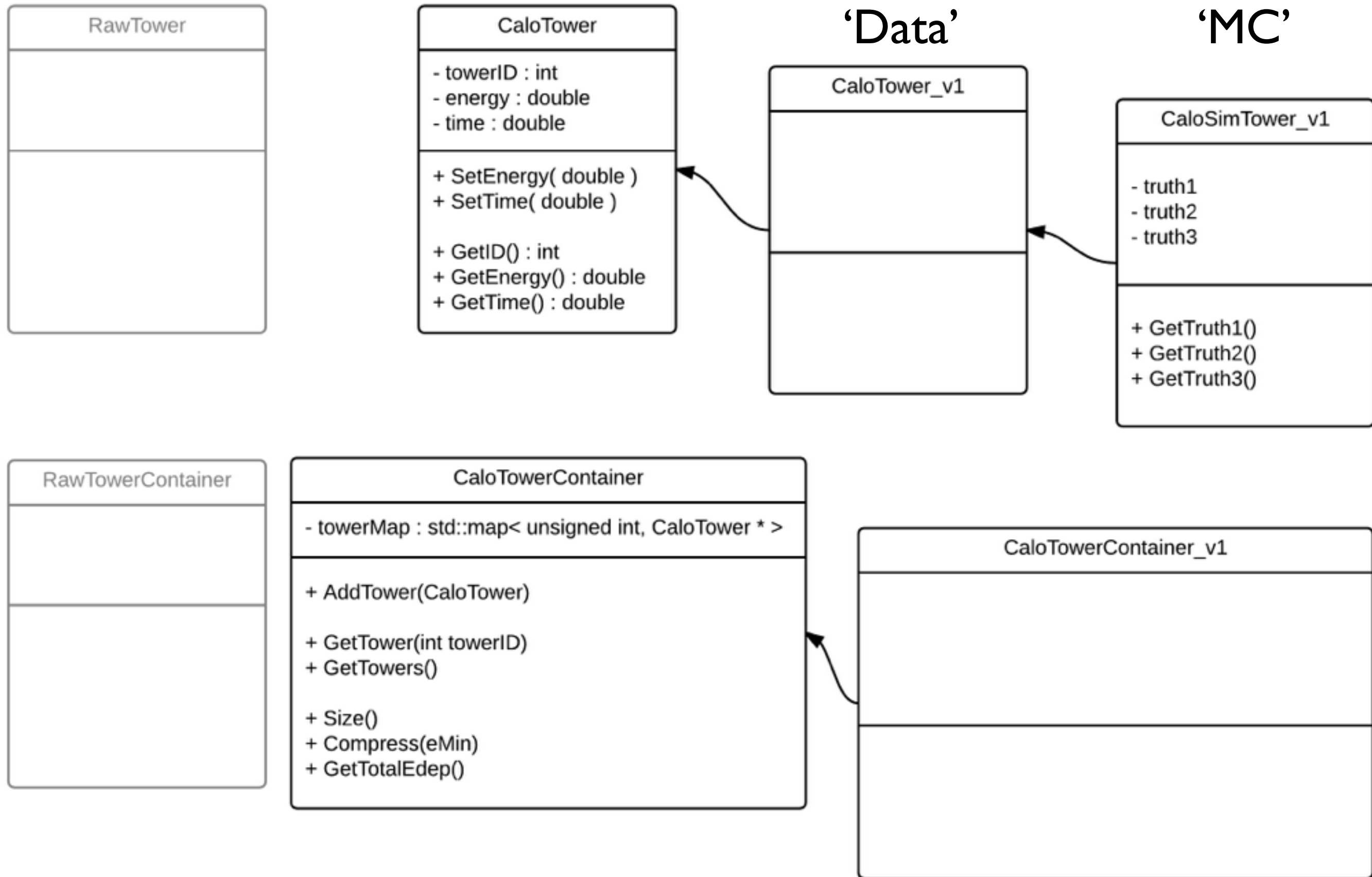
**Also: Unify access
to tower geometry**

- ▶ Pydat1_t
- ▶ Pydat3_t
- ▶ Pyjets_t
- ▶ Pythia6
- ▶ Pythia6Particle
- ▶ RawCluster
- ▶ RawClusterBuilder
- ▶ RawClusterBuilderv1
- ▶ RawClusterContainer
- ▶ RawClusterv1
- ▶ **RawTower**
- ▶ RawTowerBuilder
- ▶ RawTowerBuilderCone
- ▶ RawTowerCombiner
- ▶ RawTowerContainer
- ▶ RawTowerGeom
- ▶ RawTowerGeomv1
- ▶ RawTowerGeomv2
- ▶ RawTowerv1
- ▶ RawTowerv2

Public Member Functions

	RawTower ()
virtual	~RawTower ()
virtual void	Reset () Clear Event .
virtual int	isValid () const isValid returns non zero if object contains valid data
virtual void	identify (std::ostream &os=std::cout) const
virtual int	get_bineta () const
virtual int	get_binphi () const
virtual float	get_energy () const
virtual bool	is_adjacent (RawTower &tower)
virtual std::pair< std::map < unsigned int, float > ::const_iterator, std::map < unsigned int, float > ::const_iterator >	get_g4cells ()
virtual void	add_ecell (const unsigned int g4cellid, const float ecell)

▶ **Public Member Functions inherited from PObject**



- ▶ Pythia6Particle
- ▶ RawCluster
- ▶ RawClusterBuilder
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▶ RawTowerGeom

- ▶ RawTowerGeomv1
- ▶ RawTowerGeomv2
- ▶ RawTowerv1
- ▶ RawTowerv2
- ▶ rcdaqEventiterator
- ▶ ReadEICFiles
- ▶ recoConsts
- ▶ remote_msg_buffer
- ▶ richChannelList
- ▶ RunHeader



Public Member Functions

virtual	~RawTowerGeom ()
virtual void	identify (std::ostream &os=std::cout) const
virtual double	get_radius () const
virtual double	get_thickness () const
virtual int	get_phibins () const
virtual double	get_phistep () const
virtual double	get_phimin () const
virtual int	get_etabins () const
virtual double	get_etastep () const
virtual double	get_etamin () const
virtual std::pair< double, double >	get_phibounds (const int ibin) const
virtual std::pair< double, double >	get_etabounds (const int ibin) const
virtual double	get_etacenter (const int ibin) const
virtual double	get_phicenter (const int ibin) const
virtual int	get_etabin (const double eta) const
virtual int	get_phibin (const double phi) const
virtual void	set_radius (const double r)
virtual void	set_thickness (const double t)
virtual void	set_phibins (const int i)
virtual void	set_phistep (const double phi)

CaloTower
<ul style="list-style-type: none"> - towerID : int - energy : double - time : double
<ul style="list-style-type: none"> + SetEnergy(double) + SetTime(double) + GetID() : int + GetEnergy() : double + GetTime() : double

CaloTowerGeometry
std::map< towerID , position >
<ul style="list-style-type: none"> + ReadTowerGeometry(?) + GetTowerPositionXYZ(towerID) + GetTowerPositionPolar(towerID) + SetPolarReferencePoint(xyz) + GetPolarReferencePoint() + GetTowerNeighbors(towerID)

Geometry object created 'on-the-fly'
(TGeo?)